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RECORD OF ORAL HEARING

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SATOSHI ARAKAWA

Appeal 2009-010718
Application No. 10/714,851
Technology Center 2800

Oral Hearing Held: March 9, 2010

Before KENNETH W. HAIRSTON, JOHN C. MARTIN, and THOMAS S. HAHN, Administrative Patent Judges

ON BEHALF OF THE APPELLANTS:

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The above-entitled matter came on for hearing on Tuesday, March 9, 2010, commencing at 10:24 a.m., at the U.S. Patent and Trademark Office, 600 Dulany Street, Alexandria, Virginia, before Jan M. Jablonsky, Notary Public.

JUDGE HAIRSTON: Mr. Ferguson, do you have your business card?

MR. FERGUSON: Yes, I do, actually.

JUDGE HAIRSTON: Okay. Do you mind providing a copy -- thank you. You may begin.

MR. FERGUSON: Good morning. I'm here on behalf of Appellant in this case. And I believe the issue in this particular appeal is fairly -- fairly narrow and fairly straightforward at this point. And kind of -- everything comes back to in Claim 1 whether the feature wherein the stimulating light projecting means onto the radiation image converter panel stimulating light in a wavelength range where the rate of change of the intensity of the stimulated emission to a given change of the wavelength of the stimulating light is not larger than 1 percent per nanometer and is not smaller than negative 1 percent per nanometer. And wherein the wavelength of the stimulable light fluctuates in a manner that would cause a change in intensity of the stimulable emission.

The Examiner in this case has used a combination of references, Nakamura, U.S. Patent number 4,780,376, Neyens, U.S. Patent number 5,517,034 and Bradley, the Bradley reference, U.S. Patent number 5,043,991 to allege that Claim 1 would have been obvious at the time of the invention. Clearly Appellants disagree with this, namely because the combination of references, taken individually or in combination don't teach this idea that

there -- that given a change of wavelength of the stimulating light that there -- that the wave -- that the change in rate or -- excuse me, the rate of change of the intensity of the stimulated emissions would be maintained within the range cited in claim, and in particular given the fact that the wavelength of the stimulating light is going to fluctuate.

The Examiner -- looking at the Examiner's reply, it indicates that he believes -- or the Examiner believes that Nakamura discloses a graph showing that the rate of change of the emissions changes within the range of -- recited in Claim 1 based on the change in wavelength. And if you look, it's -- the Examiner's Figure is shown on page 5 of the Examiner's response. There's two problems. Appellant submits there's two problems with the Examiner's assertion with regards to this. One, the Examiner is attempting to put a scale to this particular figure when there's no teaching of what this scale possibly could be. There is no -- Nakamura does not provide any data points for this scale. It just show -- or for this graph. It just shows the -- just shows the graph. So to try and impart these two -- these two lines, I guess, two dotted lines, and claim that they're within 99.5 percent of the peak stimulated intensity emission, or stimulated emission intensity, there's no support for these two lines that that's what they actually show.

The second problem with the citation in Nakamura, especially with figure -- in regards to Figure 1, is that the graph is actually showing a relative intensity of stimulated emission, not the actual stimulated emission, or not the actual intensity of stimulated emission. In other words, if you look at the vertical -- if you look at the vertical axis on that graph it's between zero and one. So there is no way to correlate the graph of Nakamura to show that it has -- that if a wavelength of the stimulating light

is changed, that the stimulated -- the stimulable emission would change within a very small percentage per nanometer, which is recited in Claim 1.

Initially the Examiner had -- had conceded that Nakamura didn't teach the range and -- doesn't teach that particular range, and actually cited to Neyens, the Neyens reference as disclosing the range. And he cites to -- particularly to Figure 1. Figure 1 of Neyens suffers from a similar -- similar problem, in the fact that there are these -- you -- Figure 1 merely shows the graph, but Neyens doesn't disclose any data points upon which to draw a conclusion based on the graph outside of the maximum, the maximum intensity of the stimulable emissions. Thus it's hard to -- it would be very, very difficult to look at this particular graph and say, "Oh" -- or look at this graph and say that if the wavelength changes of the stimulating light, that the change in emission would be within 1 percent per nanometer or negative 1 percent per nanometer.

JUDGE MARTIN: Excuse me, Mr. Ferguson.

MR. FERGUSON: Yes.

JUDGE MARTIN: Let me question you about a few of those points. It seems to me the Examiner is relying on these figures just to show that it would have been obvious to pick a stimulation wavelength that's at the peak of what looks like a Bell curve.

MR. FERGUSON: Yes.

JUDGE MARTIN: And you don't have a problem with that, right?

MR. FERGUSON: Well, the claim requires that there is a change in wavelength of the stimulating light.

JUDGE MARTIN: Right, okay --

MR. FERGUSON: So even if the -- even if you have -- start at the maximum, and you change -- and you change the wavelength from the maximum, there is no way of knowing how that change -- based on just the graph alone, there is no way to impart that percentage change per nanometer. There is no data points. The only thing that -- if we were claiming -- if the claim had required merely a -- you know, a wavelength, you know, that caused no change -- and the -- and I believe in the Examiner's reply he notes that -- on page 3 he notes that the specification for the Appellant's invention -- says --said rate of change δ0 of the intensity of the stimulated emission, so on and so forth, that at a particular point the change is the tangent -- the slope of the tangent of the -- of the line to the Bell curve divided by the intensity. And for a particular point, that's not really -- that's not the argument. At a particular point, that's -- I -- let me rephrase. At a particular point, yes, the tangent at the maximum -- the -- excuse me.

The slope of the line tangent to the maximum is going to be zero. The question is what happens when that wavelength changes. Because the wavelength of the laser -- the wavelength of the stimulating light, according to Claim 1, has to change. It's part of the claim. It clearly -- the wavelength -- and to repeat, Claim 1 recites, "Wherein the wavelength of the stimulable light fluctuates in a manner that would cause a change in intensity to stimulable emission." So there is going to be change. The question is is what -- is how much is that change.

JUDGE MARTIN: So the Examiner is not incorrect to cite Bradley for the proposition that there is going to be some inherent fluctuation of that stimulating wavelength, right?

MR. FERGUSON: I do not believe that point has ever been argued. Bradley clearly indicates that even the best stable lasers show a -- show a wavelength change over light. I don't believe that we've ever -- that Appellant has ever argued that. I'm not sure that's ever really been up for --

JUDGE MARTIN: I'm sorry. When you say argue that, you mean argued against --

MR. FERGUSON: Well, yeah. I'm not sure that point has ever been up for debate, I guess is the question. I mean --

JUDGE MARTIN: Well, isn't that the Examiner's whole point? That when you combine the teachings of Nakamura and Neyens, somebody skilled in the art would want to pick the stimulating wavelength to be right at the peak to get the maximum light output, and then somebody skilled in the art -- well, whether they knew it or not, Bradley shows that well, you can't actually lock that wavelength in exactly at the peak. You're going to have some fluctuation, inherent fluctuation, when you try to satisfy -- follow the teachings of the first two references. And then -- let me just finish this thought. The Examiner's position as I understand it is there is probably -- I mean, there is, because of the shape of the curve, there is some amount of movement on either side of that center point that's going to satisfy that claim limitation, even if it's just the tiniest bit of movement shifting back and forth.

MR. FERGUSON: The question that would come -- that would be brought up by that is based on the -- based on the data points that are given and -- or lack thereof for Nakamura and Neyens, everything is -- everything in the claim is based on percentages per nanometer. So even

if you had a small, real small change in wavelength, there's no way of knowing that the change that happens is -- will satisfy the percentage points.

JUDGE MARTIN: The percentage -- that's just a range.

MR. FERGUSON: And the question is -- is, based on that curve, if you -- if you zoom that curve in far enough to the point where you could see -- where you're focusing just on the area around the peak, what happens then? I mean, from a distance and when you look at the whole graph, it looks like there's a nice -- nice shaped Bell curve, you know, that it's broad enough that it might. But without having the data points to actually support that point, it's hard to say. It's at least ambiguous in some respects. Because you don't really know what the -- what kind of change is happening, once you get away from that maximum.

JUDGE MARTIN: But you don't have to go very far from the maximum. The claim doesn't specify that you have to satisfy that percentage range limitation on the intensity for the full range of fluctuation on the laser. All you need to satisfy the claim is just the tiniest bit of fluctuation, and then see whether the result of that tiny bit of fluctuation falls within the claimed range. And since we've got a curve at our -- looks like a smooth curve at our peak in both of our first and second references, it doesn't seem like an unreasonable position to me to conclude that you inherently are going to satisfy that claim language for at least a very minuscule shift in that stimulating wavelength.

MR. FERGUSON: Well, I would come back to -- there is a line of Federal Circuit decisions that say that inherency can't be established by a possibility. It has to happen. And I really wish I had it in front -- had that case citation in front of me. But --

JUDGE HAIRSTON: In re Robertson.

MR. FERGUSON: Pardon?

JUDGE HAIRSTON: In re Robertson.

MR. FERGUSON: Thank you. You know, if you're going to say something is inherent, then it has to be there. There -- it can't be a question. It can't be a possibility. It's required by the disclosure. And in this case -- and if you're looking at -- at least at -- well, really at both Nakamura and Neyens, but especially at Nakamura, Nakamura shows a relative intensity. I mean, there -- without data points, it's all relative to something else. As I reviewed Nakamura, there -- doesn't appear to identify what -- what they're taking -- what the relative -- what they're taking those points relative to. But it still comes back to, you know, the change you see in the graph in Nakamura is -- changes in relative intensity is not the actual intensity. So the -- that particular graph is questionable at best.

What the graphs -- what the graphs you have in Neyens -- if you -- depending on what graph you're looking at, the -- let's say the -- looks like the lithium-1 graph, it's not a perfect Bell curve. There is clearly no -- without the data points to support, you know, this is what's happening at -- you know, at the maximum. If you shift half a nanometer, you know, this is your intensity. If you shift, you know, a full nanometer, here's what your -- here is what your intensity is. There is no scale imparted to the graphs.

And as noted in the Reply Brief, according to Hockerson and Halbestedt, you can't impart any sort of scale to these graphs without a specific teaching to do so. Here we don't have that. So even if you say, yes, you know, there is -- there is some drift. There's -- it's going to drift away

from this maximum point, I -- you still come back to there just doesn't appear to be any solid teaching of what these stimulable emissions are going to be once you get away from it, which makes it very -- which would make it very difficult to sit and say that it's within the -- within the percentage ranges of -- recited in Claim 1.

And, you know, I'll make the, kind of, note that the -- you know, the range in Claim 1 is a percentage per nanometer. It's not simply saying that the intensity changes by a certain -- you know, a certain -- by, you know, a certain number of units. It changes by a percentage, and that is different than what would be shown in this graph as well. So there is -- I certainly think that there is enough question in -- of what can be taken from the graphs in Nakamura and Neyens to render at least some severe questions as to the inherency that drift would cause -- that the drift would result in a change in wavelength within these percentages.

JUDGE HAHN: Counsel.

MR. FERGUSON: Yes.

JUDGE HAHN: My question goes to the scope of the claim here, because -- and what I'm zeroing in here, or trying to, is the recitation of stimulating light in a wavelength range where there is a change of intensity. In other words, I am not seeing in the claim that the wavelength range is defined.

MR. FERGUSON: No. The wavelength range is not defined.

JUDGE HAHN: Or is there -- it's an inter-relationship as I'm understanding the scope of the claim, between wavelength range and intensity change?

MR. FERGUSON: Yes. The claim is set -- the claim is written such that there is a correlation between the wavelength range of the stimulating light and the -- and the rate of change of the intensity of the stimulable emission when it changes within that range. So yes, there is -- it's a correlation, not a defined range.

JUDGE HAHN: Thank you.

MR. FERGUSON: And I believe that's borne out in the figures from the Appellant's specification.

JUDGE HAIRSTON: Is that it?

MR. FERGUSON: I believe -- I mean, that -- I think that's the crux of the difference, I guess between the Appellant's position and the Examiner's position at this time, is just the drawings just can't impart what the -- they just don't impart what the Examiner is trying to read into them, especially based on the fact that there is just no -- there is no scales given to the drawings themselves. So --

JUDGE HAIRSTON: Okay.

MR. FERGUSON: -- I believe that is it for --

JUDGE HAIRSTON: Thank you, Counselor.

Whereupon, at 10:43 a.m., the proceedings were concluded.